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(71) Applicant HITACHI LTD HITACHI VLSI EN

(72) Inventor: KAWAHARA TAKA

SATO HIROSHI NOZOE ATSUSHI YOSHIDA KEIICHI **NODA TOSHIFUM** KUBONO SHIYOU. KOTANI HIROAKI KIMURA KATSUT

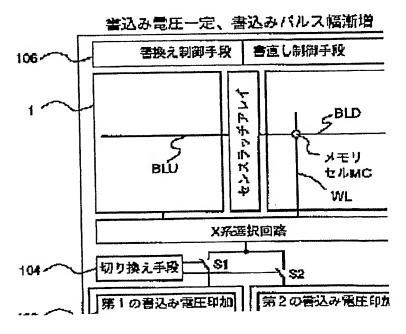
(74) Representative

(54) **SEMICONDUCTOR** INTEGRATED CIRCUIT, AND DATA-PROCESSING **SYSTEM**

(57) Abstract:

PROBLEM TO BE SOLVED: To speed up the write operation to a memory by providing a control means with a first mode, in which the change of a threshold voltage of a nonvolatile memory cell is relatively large, and a second mode, in which the change is relatively small.

SOLUTION: The voltage of a write work line of a flash memory FMRY1 is made constant and the write pulse width is increased sequentially. The system is provided with a voltageapplying pulse string generation means 100 for a first write mode (rough write) wherein a memory cell threshold voltage changes by ΔVth1 per one write pulse, and a second



write voltage-applying pulse string generation means 101 (highly accurate write) wherein the threshold voltage changes by $\Delta V th 2$. The number of pulses for changing the threshold voltage of a memory cell MC is small in the case of $\Delta V th 1$ than in the case of $\Delta V th 2$. Therefore, the number of verification times with the use of the means 100 is smaller than that with the use of the means 101. Since an overhead time is shorter when the number of verification times is smaller, the write time is reduced.

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